

## REMARKS

Applicant respectfully requests allowance of the subject application. Claims 2, 5, 11, 15, 23, 25, 37, 40, and 45 have been canceled. Claims 1, 3-4, 6-10, 12-14, 16-22, 24, 26-27, 29-36, 38-39, 41-44, and 46-58 are pending, of which claims 1, 3-4, 6-10, 12-14, 16-22, 24, 26-27, 29-35, 39, 41-43, 46, and 50 have been amended to place the application in condition for allowance.

## **Teleconference with Examiner**

Applicant appreciates the Examiner calling to discuss claim amendments that would likely advance prosecution over the references of record. Accordingly, the claims have been amended to clarify and/or incorporate claim language to place the claims in condition for allowance over the Li, Hoppe, and Jain references. The Examiner reserved the right to further evaluate the references and/or conduct a further search. As we discussed, the independent claims are amended as follows:

Claim 1 is amended to include feature(s) of claims 2 and 5;

Claim 12 is amended to include allowable feature(s);

Claim 24 is amended to include feature(s) of claim 25;

Claim 35 is amended to include feature(s) of claims 37, 40, and 45; and

Claim 50 is amended to include allowable feature(s).

The independent claims 1, 12, 24, 35, and 50, along with the respective dependent claims, are allowable over the Li, Hoppe, and Jain references. Accordingly, Applicant requests that the claim rejections be withdrawn and that the application be allowed.

## **35 U.S.C. §102 Claim Rejections**

**A.** Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,515,488 to Hoppe *et al.* (hereinafter, “Hoppe”) (*Office Action* p.3).

**B.** Claims 1-23 and 35-58 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,911,138 to Li *et al.* (hereinafter, “Li”) (*Office Action* p.5).

**C.** Claims 24-34 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,913,205 to Jain *et al.* (hereinafter, “Jain”) (*Office Action* p.12). Applicant respectfully traverses the rejection.

The Hoppe and Li references are both directed to showing the results of a query that has been input via text. For example, Hoppe describes a query input area (402) shown in Fig. 4 to enter a query expression. Only after a query expression is entered and executed are the results then displayed (*Hoppe* col.10, lines 27-54). Similarly, Li describes that a query statement is typed in (*Li* col.5, line 61), the query statement is run, and then the results are displayed (*Li* col.5, lines 47-67).

Contrary to Hoppe and Li, Applicant describes and claims a visual query system in which a query expression can be developed from shapes that are query criteria displayed on a user interface. Further, the proximate relationship of the shapes to each other in the display define the logical connectors of the query expression (*Specification ¶[0011]*; claim 1, for example). There is no indication in

1 either Hoppe or Li that a query expression is generated or developed from shapes  
2 displayed on a user interface.

3  
4 **Claim 1** recites a visual query system, comprising:

5 query criteria of a query expression displayed as shapes that have a  
6 semantic relationship which represents logical associations between the  
7 query criteria, where a first shape of query criteria is displayed proximate a  
8 second shape of query criteria within a visual query definition that is  
bordered to define a Boolean association between the first shape and the  
second shape within the visual query definition;

9 a query statement generator configured to:

10 determine the Boolean association corresponding to  
11 the semantic relationship of the shapes;

12 generate a SQL query statement for each shape of  
13 query criteria;

14 combine the SQL query statements according to the  
Boolean association to generate the query expression;

15 generate a query result of the combined SQL query  
16 statements that form the query expression; and

17 a user interface configured to display the query result of the query  
18 expression.

19  
20 As described above, neither Hoppe nor Li shows or discloses “query  
21 criteria of a query expression displayed as shapes that have a semantic relationship  
22 which represents logical associations between the query criteria”, as recited in  
23 claim 1. Hoppe and/or Li also do not show or disclose that “a first shape of query  
24 criteria is displayed proximate a second shape of query criteria within a visual

query definition that is bordered to define a Boolean association between the first shape and the second shape within the visual query definition”, as recited in claim 1. Further, neither Hoppe nor Li shows or discloses that the query expression can be generated from combined query statements generated for each shape of query criteria, and from Boolean associations corresponding to the semantic relationship of the shapes, as described in claim 1.

Hoppe only describes that a query expression is entered in a query input area and then the results of the query are displayed in a query window (*Hoppe* col.3, lines 35-46). Only after a query expression is entered and executed are the results then displayed (*Hoppe* col.10, lines 27-54). Similarly, Li only describes that a query statement is typed in (*Li* col.5, line 61), the query statement is run, and the results are then displayed (*Li* col.5, lines 47-67).

The Office cites Li for a “query statement that corresponds to query criteria is displayed along with semantic relationships that represent logical associations between the query statements as detailed in Figs. 3A-3B” (*Office Action* p.5, ¶12). Applicant disagrees because there is no indication in Li Figs. 3A-3B of “query criteria of a query expression displayed as shapes”, as recited in claim 1.

The Office also cites Li Fig. 3A (query 1) and Fig. 3B (query 2) for “generate a query statement of each shape of query criteria” (*Office Action* p.5, ¶12). Neither of the text-based query 1 (Fig. 3A) or query 2 (Fig. 3B) in Li is generated from shapes displayed as query criteria of a query expression. Further, there is no indication in Li that a query expression is generated from query statements and Boolean associations corresponding to semantic relationships of displayed shapes, as described in claim 1.

1 Accordingly, claim 1 is allowable over both Hoppe and Li for at least the  
2 reasons described above, and Applicant respectfully requests that the §102  
3 rejection be withdrawn.

4

5 **Claims 3-4 and 6-10** are allowable by virtue of their dependency upon  
6 claim 1. Accordingly, claims 3-4 and 6-10 are allowable over Li and the §102  
7 rejection should be withdrawn. Additionally, some or all of claims 3-4 and 6-10  
8 are allowable over Li for independent reasons. For example:

9 Claims 4, 6-7, and 10 recite a “visual query definition” that Li does not  
10 show or disclose. For example, claim 4 recites that “the first shape of query  
11 criteria is displayed proximate the second shape of query criteria within the visual  
12 query definition such that the first shape has an AND Boolean association with the  
13 second shape within the visual query definition”. The Office cites to Li for a text  
14 query (104) shown in Fig. 3A as a visual query definition (*Office Action* p.6, ¶15).  
15 However, the text query (104) in Li does not include any shapes that are query  
16 criteria, such as recited in claim 4.

17 Claim10 recites to “display the query result within the visual query  
18 definition on the user interface”. Li does not show or disclose a query result  
19 displayed within a visual query definition on a user interface, as recited in  
20 claim 10. The Office cites to Li for a query result (105) shown in Fig. 3A (*Office*  
21 *Action* p.9, ¶20). However, the query result (105) in Li is not displayed within a  
22 visual query definition, as recited in claim 10.

23 Further, it is noted that the Office identifies element (104) in Fig. 3A of Li  
24 as a “visual query definition” and as a basis to reject the recited feature in claim 4

1 (Office Action p.6, ¶15). Then the Office cites to element (105) in Fig. 3A of Li as  
2 a “query result” and as a basis to reject the recited feature in claim 10 (Office  
3 Action p.9, ¶20). However, it is clear in Fig. 3A of Li that the “query result”  
4 element (105) is not displayed within the “visual query definition” element (104).  
5 Accordingly, Li does not show or disclose a query result displayed within a visual  
6 query definition, as recited in claim 10.

7 Accordingly, claims 4, 6-7, and 10 are allowable over Li for at least the  
8 reasons described above and the §102 rejection should be withdrawn.

9  
10 **Claims 12, 35, and 50** are independent claims that are also allowable over  
11 Li for at least the reasons described above in response to the rejection of claim 1.  
12 For example:

13 Claim 12 recites “a visual query definition displayed to associate query  
14 criteria of a query expression, the query criteria displayed as shapes within the  
15 visual query definition such that proximate positions of the query criteria define  
16 query criteria associations”. Li does not show or disclose any such visual query  
17 definition, or that query criteria of a query expression are displayed as shapes.

18 Claim 35 recites “displaying query criteria of a query expression as shapes  
19 on a user interface, the shapes having a semantic relationship which represents  
20 logical associations between the query criteria, the query criteria further displayed  
21 as a first set of query criteria within a first visual query definition, and as a second  
22 set of query criteria within a second visual query definition such that the first set  
23 of query criteria includes the second set of query criteria”. Li does not show or

1 disclose that query criteria of a query expression are displayed as shapes on a user  
2 interface.

3 Claim 50 recites “a visual query definition to associate query criteria of a  
4 query expression, the query criteria displayed as shapes having display  
5 relationships within the visual query definition”, and “a query result of the  
6 combined query statements that form the query expression” for display in the  
7 visual query definition on a user interface. Li does not show or disclose any such  
8 visual query definition, that query criteria are displayed as shapes within the visual  
9 query definition, or that a query result is displayed in the visual query definition.

10 Accordingly, independent claims 12, 35, and 50 are allowable over Li for at  
11 least the reasons described above and the §102 rejection should be withdrawn.

12 **Claims 13-14 and 16-22** are allowable by virtue of their dependency upon  
13 claim 12. Accordingly, claims 13-14 and 16-22 are allowable over Li and the  
14 §102 rejection should be withdrawn. Additionally, some or all of claims 13-14  
15 and 16-22 are allowable over Li for independent reasons as described above in  
16 response to the rejection of claims 4, 6-7, and 10.

17 **Claims 36, 38-39, 41-44, and 46-49** are allowable by virtue of their  
18 dependency upon claim 35. Accordingly, claims 36, 38-39, 41-44, and 46-49 are  
19 allowable over Li and the §102 rejection should be withdrawn. Additionally,  
20 some or all of claims 36, 38-39, 41-44, and 46-49 are allowable over Li for  
21 independent reasons as described above in response to the rejection of claims 4,  
22 6-7, and 10.

1        **Claims 51-58** are allowable by virtue of their dependency upon claim 50.  
2        Accordingly, claims 51-58 are allowable over Li and the §102 rejection should be  
3        withdrawn. Additionally, some or all of claims 51-58 are allowable over Li for  
4        independent reasons as described above in response to the rejection of claims 4,  
5        6-7, and 10.

6  
7        **Claim 24** recites “a visual query definition displayed to associate the query  
8        criteria of a query expression based on proximate positions of the query criteria in  
9        the visual query definition and without logic operators connected between the  
10       query criteria, each of the query criteria represented by a shape displayed within  
11       the visual query definition”, and “a query result displayed within the visual query  
12       definition”.

13       Jain does not show or disclose any such visual query definition, that query  
14       criteria of a query expression are represented by shapes displayed within the visual  
15       query definition, or that a query result is displayed within the visual query  
16       definition, as recited in claim 24. Jain only describes creating an image with a  
17       bitmap editor for image analysis (*Jain* col.10, lines 49-67).

18       Claim 24 also recites “a display attribute of the visual query definition that  
19       defines a Boolean association of the query criteria represented by the shapes  
20       displayed within the visual query definition”. Jain also does not show or disclose  
21       any such display attribute of a visual query definition itself that defines a Boolean  
22       association of the shapes that are the query criteria, as recited in claim 24. In fact,  
23       Jain teaches away from a Boolean association being defined by a display attribute  
24       of a visual query definition. Fig. 3 of Jain illustrates that Boolean search criteria  
25

1 “AND” or “OR” must be selected for input when formulating a bitmap image for  
2 comparison.

3 Accordingly, claim 24 is allowable over Jain for at least the reasons  
4 described above and the §102 rejection should be withdrawn.

5 **Claims 26-27 and 29-34** are allowable by virtue of their dependency upon  
6 claim 24. Accordingly, claims 26-27 and 29-34 are allowable over Jain and the  
7 §102 rejection should be withdrawn. Additionally, some or all of claims 26-27  
8 and 29-34 are allowable over Jain for independent reasons. For example:

9 Claim 32 recites that “a first shape of query criteria is displayed proximate  
10 a second shape of query criteria within the visual query definition such that the  
11 first shape has an AND query statement association with the second shape.” Jain  
12 does not show or disclose any such proximate display of shapes within a visual  
13 query definition, or that shapes have a query statement association based on a  
14 proximate display of the shapes, as described in claim 32. Further, the Office  
15 rejection of claim 32 does not address the recited features and the rejection should  
16 be withdrawn (*Office Action* p.14, ¶35).

17 Accordingly, claim 32 is allowable over Li for at least the reasons  
18 described above and the §102 rejection should be withdrawn.

## **Conclusion**

Pending claims 1, 3-4, 6-10, 12-14, 16-22, 24, 26-27, 29-36, 38-39, 41-44, and 46-58 are in condition for allowance and Applicant respectfully requests issuance of the subject application. If any issues remain that preclude issuance of the application, the Examiner is urged to contact the undersigned attorney before issuing a subsequent Action.

Respectfully Submitted,

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